

“Right Angle” Trees

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The Island of Martha's Vineyard, off the coast of Massachusetts, presents many features of interest to scientific observers. A state road runs east and west the length of the island for about twenty-five miles. It is along this much travelled highway that rows of strange trees are to be seen. For many years we have called them “right angle” trees, for they are bent over parallel to the ground and later take a new lease of life, apparently, and straighten up again. Some appear to have grown that way naturally, and at first thought it would seem that the main shoot had died and a branch had taken its place, but along this highway there are too many such trees to lend probability to this hypothesis. Furthermore, their trunks or branches are usually bent in the direction in which the road runs. In fact, many of the more modern wire fences have become embedded in the trunks.

Next, it was supposed that the prevailing wind might have been the cause of the malformation. However, these trees are surrounded by others that are straight, and they are well protected from the wind except in one locality. At West Chop, the northwest point of Vineyard Haven Harbor and directly across from Woods Hole, the winds sweep across Vineyard Sound so fiercely at times that by continued blasts for many years, the famous wind-blown cedars have been produced. Near these trees are “right angle” oaks, but here again, the bent trunks are more often parallel with the road than with the direction of the wind.

There are always city people in a summer colony who are so endowed with imagination that Indians play a prominent part in their ideas of the country. Indians, we were told, bent these trees over to mark their trails. But this idea had to be discarded because some of these bent trees almost touch their bent neighbors.

Some of the great whalers of the world have been natives of Martha's Vineyard. Consequently, another explanation was set forth from the mariner's point of view: these trees were bent over by the early settlers to produce natural right angle joints

to be used in making "ships' knees." These are the parts of a boat where the deck beams are fastened to the ribs of the hull, and, again, where the keel is attached to the ribs. This idea seemed plausible enough until it was noticed that the bent trees along the state road to Gay Head were on the north side almost exclusively. If they had been bent to produce "ships' knees" they could have been grown on either side of the road equally well or in wide groups rather than in rows so often parallel to the road.

It was not until we consulted an all-year-round resident of the island that we learned the true history of these trees. They are the remains of the old "lop fences" which he had seen his grandfather make. These fences were to mark ownership of cleared land or woodlot or to keep sheep in a pasture. This latter use accounts for the fact that in a large majority of these trees the transverse portions are between twenty and forty inches from the ground. But in some cases the cross bars are almost hidden in the ground and in others they are shoulder high. Very few of the fences stand now as they did originally, for individual trees have grown larger and others have rotted to the ground or disappeared entirely, leaving wide gaps.

The height at which the cross bars were made probably varied with each fence builder, because these trees found near together usually have the bars at the same height. The transverse bar was made by cutting a notch in a sapling at the proper height and bending it over to the ground or fastening it down with a weight or rope. Some of these first notches were cut so deeply that the tree was never able to heal the wound and the splinters stick out like broken bones through flesh.

Branches from the transverse bar would sometimes grow up straight to form the new main trunk of the tree. If this was not likely to occur, a second notch and bend would be made in order that the original main trunk could again fulfill its duty of reaching skyward. So many scrub oaks in their natural condition have branches coming out at right angles fairly near the ground, that it is probable that in some cases where trees were to be used as fences, the main trunk was cut off entirely in order that a sturdy branch at right angles could take its place. In a few cases the branches on both sides of the main trunk were utilized as bars, giving an appearance of a candelabrum. However, most of the

trees were bent over or lopped to *one* side,—hence the name “lop fence.”

In only one instance have we found trees other than oaks used. In that case a clump of beech trees was in the direct path of the fence and instead of cutting them out, the fence builder added them in a crude manner, some of the smaller trunks being slashed to the ground. These, however, had died, forming a tangle of dead wood. This gives an explanation of the fact that lop fences were made almost exclusively of oaks, for oaks are the only trees in the region that can withstand this harsh treatment.

These right-angle trees on the main highway caused so much family and neighborhood discussion that various exploration



FIGURE 1. Example of right angle tree at Martha's Vineyard.

trips were made throughout the island on old country roads, confirming the fact that the lop fence had at one time been in common use.

When we discovered this fact, we naturally believed that such fences could be found in other parts of the East where the same sort of scrub oak and pine with their ever-accompanying blueberry bushes are dominant features. We were therefore not surprised to find remains of lop fences on Cape Cod between Plymouth and Sagamore, near the Cape Cod Canal. Doubtless the early settlers of Plymouth and Duxbury learned to make fences in as quick a way as possible by using growing trees instead of split rails.

On Long Island, the Middle Island Road which stretches for miles and miles through scrub growth of pine and oak, wild grapevines and berry bushes, makes any lover of Martha's

Vineyard feel quite at home. On approaching this road east from Huntington, Long Island, we saw our first right angle tree—quite isolated from any other such trees and bent at an angle toward the state road. This tree was very slender, only four inches in diameter, and was surrounded by other small trees, all straight. Between this point and Smithtown, Long Island, we came upon the trail of many old bent trees (figure 2). The



FIGURE 2. Right angle tree near Smithtown, L. I.

greatest find was a row of at least fifty-two trees near Centereach, Long Island. They looked very old, were lopped over quite near the ground, and stood close to one another. This row, at an angle of 60° to the Middle Island Road, stood out clearly against the landscape because of the cleared fields on either side. This particular lop fence is the best example we have ever found. Rumors of others in Pennsylvania and Ohio have as yet not been confirmed by the writer.

WHITE PLAINS, N. Y.